CLAIMS

1. A radio base station apparatus comprising:

two diversity antennas, each comprised of a plurality of antenna elements, spaced apart from each other by a distance enabling space diversity; and

transmitters provided for each of said two diversity antennas, each of said transmitters having calculating means for calculating a transmission weight from a reception weight or direction-of-arrival information obtained by using an uplink signal, and multiplying means for multiplying a transmission signal spread with a predetermined spreading code by the transmission weight.

2. The radio base station apparatus according to claim 1, wherein each of said transmitters further have offset providing means for providing a transmission signal with a phase offset, or a phase offset and a power offset.

3. The radio base station apparatus according to claim 2, wherein said multiplying means operates as said offset providing means.

4. The radio base station apparatus according to claim 1, wherein each of said transmitters further have calculating means for performing transmit diversity calculation on a transmission signal to be subjected to spreading.

5. A communication terminal apparatus for

performing a radio communication with a radio base station apparatus, said radio base station apparatus comprising:

two diversity antennas, comprised of a plurality of antenna elements, spaced apart from each other by a distance enabling space diversity; and

transmitters provided for each of said two diversity antennas, each of said transmitters having calculating means for calculating a transmission weight from a reception weight or direction-of-arrival information obtained by using an uplink signal, and multiplying means for multiplying a transmission signal spread with a predetermined spreading code by the transmission weight.

6. A radio transmission method comprising the steps of:

calculating a transmission weight from a reception weight or an angle of a direction of arrival obtained by using an uplink signal;

providing a transmission signal spread with a predetermined spreading code with a phase offset, or a phase offset and a power offset;

multiplying the transmission signal provided with the offset by the transmission weight; and

transmitting the transmission signal multiplied by the transmission weight from two diversity antennas, each comprised of a plurality of antenna elements, spaced

apart from each other by a distance enabling space diversity.

7. A radio transmission method comprising the steps of:

calculating a transmission weight from a reception weight or an angle of a direction of arrival obtained by using an uplink signal;

performing transmit diversity calculation on a transmission signal;

spreading the transmission signal subjected to the transmit diversity calculation with a predetermined spreading code;

multiplying the spread transmission signal by the transmission weight; and

transmitting the transmission signal multiplied by the transmission weight from two diversity antennas, each comprised of a plurality of antenna elements, spaced apart from each other by a distance enabling space diversity.